

WHAT IS CLAIMED IS:

1. A method of blurring a digital image, comprising the steps of:
separating the image into noisy artifacts and less noisy artifacts;
averaging the less noisy artifacts over a spatial range for each pixel of the image; and
guiding the noisy artifacts by the less noisy artifacts in the step of averaging.
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2. The method of claim 1, wherein the step of guiding comprises the steps of:
determining a difference between a pixel at a centrum of the spatial range and
another pixel of the spatial range; and
weighting the noisy artifact based on the differences.
3. The method of claim 2, wherein the steps of determining and weighting are each
performed with respect to each pixel of the image and the weighting correlates each
spatial range of the less noisy artifacts with each corresponding range of the noisy
artifacts.
4. The method of claim 1, further comprising the step of:
deriving a representation noisy artifact as the average of the noisy artifacts; and
wherein the steps of guiding and weighting are performed with the representative noisy
artifact.

- 1 5. A method of blurring, comprising the steps of:
- 2 deriving a noisy artifact;
- 3 selecting a less noisy artifact;
- 4 subdividing the noisy artifact into a plurality of windows;
- 5 subdividing each of the plurality of windows into a plurality of squares;
- 6 subdividing the less noisy artifact into a plurality of windows corresponding to the
- 7 plurality of windows of the noisy artifact;
- 8 subdividing each of the plurality of windows of the less noisy artifact into a
- 9 plurality of squares corresponding to the plurality of squares of the noisy artifact;
- 10 determining a difference between a square at a centrum of a window of the less
- 11 noisy artifact and another square within the window of the less noisy artifact;
- 12 weighting a value for the square based on the difference;
- 13 summing all of the values for the square as so weighted;
- 14 multiplying a value for the square of the window of the noisy artifact by the result
- 15 of the step of summing;
- 16 summing all of the results of the step of multiplying for each square of the
- 17 window of the noisy artifact; and
- 18 dividing the result of the step of summing all of the results, by the result of the
- 19 step of summing all of the values for the square.

- 1 6. The method of claim 5, further comprising the steps of:

2 clamping the weighting step between minimum and maximum extremes, if the
3 noisy artifact tends to be overly expressed in a result.

1 7. The method of claim 5, further comprising the step of clamping the step of
2 weighting so that the weight for the value is in the range of 0 to 1.

1 8. The method of claim 5, wherein the noisy artifact and the less noisy artifact
2 exhibit the color green; and further comprising the steps of:
3 varying the step of weighting by (a) 75% for the square of the window of the
4 noisy artifact which is less than the square at the centrum of the window of the noisy
5 artifact and (b) 25% for each square of the window of the noisy artifact which is not less
6 than the square at the centrum of the window of the noisy artifact.

1 9. A method of blurring, comprising the step of guiding a noisy artifact by a less
2 noisy artifact.

1 10. The method of claim 9, wherein the step of guiding comprises the step of limiting
2 an expression of an overly expressed property of the noisy artifact.

1 11. The method of claim 10, wherein the noisy artifact exhibits a property of the color
2 green.

12. A method of blurring, comprising the step of weighting a value in a blur region.

13. The method of claim 12, wherein the step of weighting is affected by a less noisy artifact.

14. The method of claim 12, wherein the step of weighting is affected by an extent of a property of an artifact.

15. The method of claim 12, wherein the step of weighting is dictated by a noisy artifact and a less noisy artifact.

1 16. A method of signal processing, comprising the steps of:

2 deriving a noisy artifact and a less noisy artifact from an analog signal; and

3 guiding the noisy artifact by the less noisy artifact.

1 17. The method of claim 16, further comprising the step of averaging a region of the
2 noisy artifact; and wherein the step of guiding correlates the region of the noisy artifact
3 with a corresponding region of the less noisy artifact.

1 18. The method of claim 17, further comprising the step of:

2 repeating the steps of deriving, guiding, and averaging with more than one noisy
3 artifact.

1 19. The method of claim 17, further comprising the step of:

2 repeating the steps of deriving, guiding, and averaging with more than one less
3 noisy artifact.

1 20. The method of claim 17, further comprising the step of:

2 repeating the steps of deriving, guiding, and averaging with more than one noisy
3 artifact and more than one less noisy artifact.

1 21. The method of claim 20, wherein at least one of the more than one noisy artifact
2 corresponds to at least one of the more than one noisy artifact, and vice versa.

1 22. A system for blurring, comprising:

2 a noisy artifact;

3 a less noisy artifact, wherein spatial locations of the less noisy artifact

4 corresponds to locations of the noisy artifact; and

5 a computer for guiding the noisy artifact by the less noisy artifact.

1 23. The system of claim 22, wherein the computer weights the location of the noisy

2 artifact according to a differential at the corresponding location of the less noisy artifact.